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SUBDELTOID BURSITIS.*

By SAXTON TEMPLE POPE, M. D., San Francisco.

Subdeltoid bursitis has been called many names: periarthritis, brachial neuritis, circumflex neuritis, and rehumatism; but Codman first gave an accurate description of the disease and dictated its cure.

It is a disease that nearly always results from trauma, seldom from infection. The method of its production is that of excessive abduction of the shoulder joint, in which position the bursa is pinched between the greater tuberosity of the humerus and the acromion. Codman has shown that the supra-spinatus muscle initiates the movement of abduction, and if for any reason this muscle fails to act, its tendon becomes caught beneath the acromion and suffers injury with the bursa during the act of abduction.

The symptoms are local pain, neuritic distress down the arm and across the neck, limited movement, inability to separate the arm from the body, or use the deltoid muscle at all. Pain may be worse at night. Disability may last for weeks in the acute traumatic cases, to years in the adhesive or hyperplastic bursitides. It may completely incapacitate a man for work.

Rest, hot compresses, immobilization are required in the acute cases. If effusion exists, aspiration may assist recovery. Manipulations are curative in some types, especially the adhesive bursitis.

Where disability is prolonged and other methods fail, complete cure can be obtained by dissecting out the bursa. In a series of 24 cases, 15 were treated palliatively, or by manipulation; 3 by aspiration; 6 by operation. The latter gave the highest percentage of cures.

Discussion.

Dr. G. C. Macdonald: I have seen a great number of such cases in sailors, where they have fallen on the deck or other parts of the ship. My experience is that removing the bursa does effect a cure. A man with bursitis is certainly incapacitated, in some cases practically so for life. In very chronic conditions the bursa becomes much enlarged and contains the so-called rice or melon-seed bodies.

* Read before the San Francisco County Medical Society, August 15, 1916.

TWO CASES OF POISONING FROM THE USE OF ALYPIN IN THE URETHRA.*

By LOUIS CLIVE JACOBS, M. D., San Francisco.

The purpose of my talk this evening is to report to you two cases of poisoning from the use of alypin in the urethra.

We find in treating local conditions in the deep urethra that in certain patients it has been found advisable to use a drug locally for the purpose of producing analgesia. The necessity for this arises when one is dealing with a hypersensitive mucous membrane in a person who is unable to stand much pain; when an operative procedure, such as punching out a prostatic bar obstruction, in which cases we have no choice but a local anesthetic, is undertaken; or when removing a large-sized foreign body from the bladder through the operative cystoscope.

We know that the mucosa of the deep urethra is normally more sensitive than the mucous membrane of any other part of the body; and in the mere passage of instruments such as the cystourethroscope it has been my practice not to resort to the use of various drugs such as cocaine, novocaine, stovaine, etc. But I have occasionally used alypin in the deep urethra and upon reports of such men as Bransford, Lewis, Willys Meyer, Edward Keyes, Paul Pilcher and other prominent urologists known to you all, I had become converted to the belief that it was without toxic effects.

Bransford Lewis recommends the use of this drug almost indiscriminately. He applies it to the deep urethra in the form of tablets through a small urethral depositor, an instrument which he devised, and states that as soon as the effect of one tablet is worn off another can be deposited in the necessary spot, and that in his experience he has never noticed toxic symptoms from its use.

Though I believe alypin to be as valuable a drug as any which we might use to obtain analgesia in the deep urethra, I must state that it is not without its dangers and the sooner we realize its dangers the better we shall be able to guard against its untoward effects.

Alypin itself is a drug which has been popularized in recent years by a most prominent urologist. Chemically it is listed as a monhydrochloride of benzoyl, etc., and occurs as a white powder, crystalline, very soluble in water and alcohol. Watery solutions have a neutral reaction and are easily sterilized. Hence alypin can be prepared in various solutions of various strengths. Keyes

* Read before the San Francisco County Medical Society, October 31, 1916.

of New York has used as high as 25 cubic centimeters of a 2% solution (8 gr.) in the urethra and bladder without toxic effect. Recent investigators have demonstrated the dependence ot toxicity of cocaine and novocaine on the rate at which the drug is absorbed, therefore, I must give this as an explanation of the two cases which I am reporting. Fortunately both of these patients recovered without any permanent effects.

Though literature tells us that Necker observed occasionally by-effects from 3% alypin solutions especially in cases of sphincteric spasm and Garasch twice witnessed poisonous effects after the introduction of 5 cubic centimeters of 2 and 5% solutions respectively, into the urethra. The symptoms consisted of nausea, vomiting, vertigo, dyspnoea, hallucinations and spasms, but subsided quite rapidly without any permanent damage. Garasch believes that toxic manifestations may readily result in exhausted individuals.

On June 24th, Mr. ZY. was referred to me by a general practitioner of this city for a persistent morning discharge for which he had been treating for the last two years. With two drams of 2% solution of alypin injected by pressure through the urinary meatus and held for a few minutes, I was enabled to pass a No. 26 cystourethroscope without any discomfort to the patient and found an enormously enlarged verumontanum with large ejaculatory orifices and dilated discharging ducts. I mention this to emphasize the fact that the examination was a thorough one without any discomfort or distress whatever to the patient. He was immediately enabled to return to work and reported at my office within a few days feeling "tip top," as he expressed it. On July 10th, in order to treat the diseased area in the posterior urethra, I intended to use a large Leurs posterior urethroscope, which I tried to pass but on account of the sensibility of the urethra withdrew it and found there was an escape of a few drops of blood due to the traumatism of the instrument in the anterior urethra. I then injected two drams of 2% alypin solution, waited for a few minutes and then inserted the urethroscope. When the instrument reached the posterior urethra there was a terrific spasm on the part of the patient followed by convulsions which lasted for about five minutes. His respiratory muscles were affected and he was in clonic spasm, followed by a tonic spasm, the face was cyanotic, the pupils dilated and the jaws were locked in spasm. The pulse which was rapid and full became weaker and hardly perceptible. By unlocking the jaws and performing traction on the tongue with artificial respiration I was soon gratified to see the patient again breathing normally, and the pulse as full and strong as previous to the injection. He was conscious but more or less stupefied, unable to remember his name or where he lived, but knew that he was in a doctor's office. It was at least two hours before he felt able to find his way home. Since this time I have treated and examined Mr. ZY., frequently passing instruments into his urethra without the use of local anesthesia and he has never had any repetition of this early attack. His history shows no epilepsy nor any other condition that would have any bearing upon this report.

Case No. 2, was a case of Dr. Henry Meyer's. The patient, a man of 27 years of age, was referred to him for an examination owing to the fact that he had had, several years previously, a kidney removed which was supposed to be tuberculous and an attempt at catheterization of the bladder was made, but due to the highly sensitive urethra it was very painful and the catheter was withdrawn, following which there was a slight bleeding. A two dram dose of a 2% alypin solution was then injected by means of pressure. Within a few minutes, just as the cysto-urethroscope had entered the meatus, there were violent clonic spasms with the complete cessation of respiration, the patient became cyanotic and the pulse was not perceptible. The patient was apparently dead but after artificial respiration with traction on the tongue, respiration was gradually established. It was at least five hours before he had sufficiently recovered to be sent home.

We should take cognizance of the fact that the urethras of these two cases were highly sensitive; also that there was bleeding in both cases before the injection of alypin; that neither could have arisen from the irritation of the instrument alone; and that in Dr. Meyer's case the instrument had not passed beyond the meatus before the patient had convulsions.

From these cases, I draw the following conclusions:

That the toxic symptoms were the result of alypin absorption.

That the development of toxic symptoms is dependent upon the rate of absorption—a rapid absorption and hypersusceptibility of the patient to the drug.

That alypin is absorbed more readily from a lacerated or traumatized mucous membrane of the urethra.

That its toxicological action is first upon the respiratory system and then upon the circulatory system.

That when the mucous membrane is traumatized as evidenced by the escape of blood from the urinary meatus, it is not safe to instill a local anesthetic such as cocaine, alypin, novocaine, etc.

Discussion.

Dr. M. Krotoszyner: The two cases reported by Dr. Jacobs are of great practical importance, since alypin always enjoyed the reputation of combining safety with efficacy as a local anesthetic of the genito-urinary canal. Such symptoms, as observed in these two cases, we were used to see in connection with the employment of cocaine in the urethra, and in my earlier work I have seen distressing, and in one or two instances, most alarming symptoms after injection of small doses of cocaine in the anterior urethra. Absorption of the drug, when injected into the bladder, rarely occurs under normal conditions. The late Nitze was in the habit of injecting two ounces of a 4% cocaine solution into the bladder prior to cystoscopy, and I know of only one accident in connection with that procedure, though I attended a great many cystoscopies at his clinic.

Owing to the dangers of local anesthesia, even

when using small doses of less toxic drugs, like novocaine, I have, for many years past, carried out urethral instrumentation, including cystoscopy, whenever feasible, without the application of any anesthetic, and such experiences, as reported by Dr. Jacobs, will certainly tend to fortify me in continuing in the same manner in the future.

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INDUSTRIAL ACCIDENTS.

[In this column we shall publish, from time to time, short comments of practical value by men of experience, dealing with special fields of medicine in relation to Industrial Accidents.]

COMMON INJURIES OF THE EYE AND THEIR TREATMENT.

By HANS BARKAN, M. D., San Francisco.

Injuries of the eye form a considerable portion of the bodily injuries that we are called to deal with in the Accident Insurance cases. They of all injuries receive as nearly as I have been able to see in the last two years, the least expert attention, when on the face of it, they require perhaps the most expert. This is, of course, due to the fact that necessity—imposed by immediate need for aid in localities where the attention of a specialist is impossible to obtain—calls for treatment by some one though not an expert.

For the benefit of those who are called upon to attend to these cases before they can be referred to a specialist or who may have to attend to the case for a number of days I would like to make the following points; which, while necessarily very fragmentary, apply to perhaps 60 to 70 per cent. of the ordinary injuries seen.

First: Superficial corneal injuries containing foreign bodies: 4% cocaine 1 drop a minute for five minutes, with the eye closed during this time to prevent drying of the corneal epithelium and the settling of dust upon the insensitive cornea. Removal of foreign body preferably with a dull spud, not a pointed one. If patient cannot hold his eye steady, it helps to make him look at a candle with his sound eye in a dark room. Remove not only the foreign body, but every bit of rust or brown discoloration left; when the body has been gently chipped out, there will be a congested conjunctiva with some evidence of secretion shown by the cilia being stuck together. Evert upper lid and apply 1% silver nitrate with an applicator, pressing this down upon the mucous membrane until this assumes a faint skimmed-milk hue. Leave the eye open for half an hour to an hour until the first desquemation of epithelium has taken place. On the end of a glass rod put any bland ointment into the conjunctival sac and bandage for about six hours. Dark glasses the next day and for a few days a solution of zinc sulph. ½%.

Second: Ulcers of the cornea usually central, with usual antecedent history of the eye being slightly scratched with some object. The majority of cases are pneumococcus ulcers of a uniform yellow gray color, generally with an advancing deeper yellow colored edge.

The immediate treatment should be atropin 1 to 4% 3 to 4 drops the first half hour until the pupil is dilated. With thorough cocanizing apply applicator soaked in tincture of iodine to the ulcer until the entire ulcerated tissue is stained a mahogany brown. Dionin 10% t. i. d. and hot compresses for ten to fifteen minutes every hour, the eye closed between times by a pad or bandage. If at the end of six to twelve hours, the advancing edge is still a deep yellow or has progressed slightly while the body of the ulcer is somewhat cleaner, try zinc sulph. 20% solution with an applicator. Should the edge still advance, the actual cautery should be employed, destroying with it not only the advancing edge, but corneal tissue slightly beyond this.

If an electric cautery is not available, a knitting needle brought to a red hot point in a Bunsen burner will do very nicely. This all provided the ulcer when first seen is small.

By the time a patient is properly attended to—which is often late because the patient has so many times gotten sawdust, grains of wheat, coal or some other object into his eye without injury, that in this particular instance he simply wipes out the foreign body and waits four or five days before consulting the doctor—the ulcer is so large that nothing short of cauterizing the entire surface and beyond the advancing edge will stop it. In these cases such measures as tincture of iodin, zinc sulphate and optochin are useless. The best that can be promised the patient and the insurance company is preservation of the eye ball, but no preservation of vision.

Third: Foreign bodies inside the eye bring forth a multitude of interesting considerations. Those that must not be allowed to stay in are steel, iron, copper, zinc or any other corroding metal. Glass or wood is sometimes kept within the eye without great irritation. I have seen some foreign bodies lodged in the lens, causing of course a traumatic cataract, but not requiring immediate removal, as the lens metabolism is so slow that the eye as a whole is not affected by chemical action of the foreign body.

A word here about X-ray localization. It should be immediately done in every case. If the report states that the object is a number of mm. within the eyeball, one need not doubt the matter. If it is a question, however, of only a mm. or two in or out, it must not be forgotten that taking the refraction into consideration is here a useful point. If the other eye be myopic or a long eye, the chances are that the afflicted eye is approximately of the same condition; if the sound eye be hypermetropic or a short eye, the same conclusion is probably true; the measurement is made for an eye